CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.13/BU/CSR-6/858b/CEMENT/2015-16 Date: 08.06.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer**, Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
*AGENCY	:	**Mr. B. Umesh,** No.127, 3rd Cross, Ramaiah Enclave, Bangalore – 560073.
*NAME OF THE WORK	:	Improvements to footpath in 2nd cross road and other roads near Sriram temple in Mallasandra in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
*REFERENCE	:	BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 05.06.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	05.06.2015
PERIOD OF TESTING	:	05.06.2015 to 08.06.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	31.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	165 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	490 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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Job No.: CTCE/BBMP/W.No.13/BU/CSR-6/858b/SAND-Gradation/2015-16 : 08.06.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

*** Agency** : **Mr. B. Umesh,**
No.127, 3rd Cross, Ramaiah Enclave, Bangalore – 560073.

*** Name of Work** : Improvements to footpath in 2nd cross road and other roads near Sriram temple in Mallasandra in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 05.06.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 05.06.2015

Date of Testing : 08.06.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.80	90-100	90-100	90-100	95-100
2.36	74.90	60-95	75-100	85-100	95-100
1.18	50.40	30-70	55-90	75-100	90-100
600 Micron	25.40	15-34	35-59	60-79	80-100
300 Micron	11.90	5-20	8-30	12-40	15-50
150 Micron	3.90	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

AE-13

Civil-Tech Consultants & Engineers Bangalore

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Job No.: CTCE/BBMP/AW.No.13/BU/CSR-6/858b/AGG/GR/2015-16 : 08.06.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
* Agency	: **Mr. B. Umesh,** No.127, 3rd Cross, Ramaiah Enclave, Bangalore – 560073.
* Name of Work	: Improvements to footpath in 2nd cross road and other roads near Sriram temple in Mallasandra in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 05.06.2015
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 05.06.2015
Date of Testing	: 08.06.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.50	95-100	85-100
20	37.50	30-70	0-20
10	13.50	10-35	0-5
4.75	1.00	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.13/BU/CSR-6/858b/CC Solid Block/2015-16 : 11.06.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
* Agency	: **Mr. B. Umesh,** No.127, 3rd Cross, Ramaiah Enclave, Bangalore – 560073.
* Name of the Work	: Improvements to footpath in 2nd cross road and other roads near Sriram temple in Mallasandra in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 05.06.2015
Sample Received on	: 05.06.2015
Date of Testing	: 11.06.2015
Size of Blocks	: 400mm x 200mm x 200mm
Cross Sectional Area	: 80000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	34.25	258.5	3.23	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.26	259.6	3.25	
3	Block 3	35.62	260.1	3.25	
4	Block 4	36.20	261.2	3.27	
5	Block 5	35.21	262.2	3.28	
6	Block 6	36.20	263.1	3.29	
7	Block 7	35.69	264.2	3.30	
8	Block 8	34.80	262.8	3.29	

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Job No.: CTCE/BBMP/W.No.13/BU/CSR-6/858b/CC Solid Block/2015-16 : 11.06.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
* Agency	: **Mr. B. Umesh,** No.127, 3rd Cross, Ramaiah Enclave, Bangalore – 560073.
* Name of the Work	: Improvements to footpath in 2nd cross road and other roads near Sriram temple in Mallasandra in Ward No.13, Shettyhalli Sub Division, BBMP,
Reference	: BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 05.06.2015
Sample Received on	: 05.06.2015
Date of Testing	: 11.06.2015
Size of Blocks	: 400mm x 150mm x 200mm
Cross Sectional Area	: 60000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	25.65	196.2	3.27	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	26.32	197.2	3.29	
3	Block 3	29.65	198.1	3.30	
4	Block 4	26.32	196.5	3.28	
5	Block 5	25.65	197.2	3.29	
6	Block 6	24.90	193.6	3.23	
7	Block 7	22.32	194.8	3.25	
8	Block 8	25.65	195.6	3.26	

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Job No.: CTCE/BBMP/W.No.13/BU/CSR-6/858b/CUBE/2015-16 25.07.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
* Agency	: **Mr. B. Umesh,** No.127, 3rd Cross, Ramaiah Enclave, Bangalore – 560073.
* Name of the work	: Improvements to footpath in 2nd cross road and other roads near Sriram temple in Mallasandra in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	: BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 05.06.2015
* Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{15}
Compressive Strength as on	: 28th day
Sample Received on	: 27.06.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.06.2015	25.07.2015	8.095	350.2	15.56
2	27.06.2015	25.07.2015	8.129	364.5	16.20
3	27.06.2015	25.07.2015	8.250	378.9	16.84

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Job No.: CTCE/BBMP/W.No.13/BU/CSR-6/858b/Pre Cast Slab/2015-16

30.06.2015

CEMENT CONCRETE CORE (PRE CAST SLAB) TEST REPORT

* Name of Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
* Name of Agency	:	**Mr. B. Umesh,** No.127, 3rd Cross, Ramaiah Enclave, Bangalore – 560073.
* Name of work	:	Improvements to footpath in 2nd cross road and other roads near Sriram temple in Mallasandra in Ward No.13, Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 05.06.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Pre cast slab
Sample Received on	:	25.06.2015
Date of Testing	:	30.06.2015

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	80.00	0.395	2514.65	1.60	0.960	32.20	16.40	17.71	17.00	21.25
2	50.00	81.00	0.403	2533.90	1.62	0.965	32.60	16.60	17.93	17.30	21.63
3	50.00	82.00	0.416	2583.74	1.64	0.970	33.15	16.88	18.23	17.69	22.11

* Information is furnished by the Customer/Representative

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